

**AMENDMENTS TO THE DRAWINGS**

Applicants' representative respectfully submits a replacement drawing sheet to correctly show a Directed Acyclic Graph (DAG) as disclosed in the specification. The attached replacement sheet does not add any new matter pursuant to 35 U.S.C. §132. This sheet replaces the original sheet that includes figure 1.

### **REMARKS**

Claims 1-33 are currently pending in the subject application and are presently under consideration. Claims 1, 4, 5, 13-15, 20, 22, 29, 30, and 33 have been amended herein to emphasize various novel aspects of the invention.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

#### **I. Objection of Claim 20**

Claim 20 is objected to because of minor informalities. Claim 20 has been amended herein and withdrawal of this rejection is respectfully requested.

#### **II. Rejection of Claims 2-11, 19, 27 and 33 Under 35 U.S.C §112**

Claims 2-11, 19, 27 and 33 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants' representative would like to thank Examiner Pich for the courtesies extended during the phone conversation on June 8, 2005, wherein the lack of a transitional phrase rejection was withdrawn with respect to claims 2-11, 19, 27, and 33. In addition, claims 4 and 33 have been amended to correct antecedent basis regarding limitations therein. Applicants' representative respectfully requests the rejection be withdrawn.

#### **III. Rejection of Claims 1-20, 22-29 and 33 Under 35 U.S.C. §101**

Claims 1-20, 22-29 and 33 stand rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Independent claims 1, 22, and 29 have been amended to include the utilization of a computer as suggested by Examiner. Furthermore, claim 33 has been amended to refer to statutory subject matter. In view of the above, applicants' representative respectfully requests this rejection be withdrawn.

#### **IV. Rejection of Claims 1-4, 6, 7, 10, 11, 21, 22, 25-27 and 29-32 Under 35 U.S.C. §102(e)**

Claims 1-4, 6, 7, 10, 11, 21, 22, 25-27 and 29-32 stand rejected under 35 U.S.C. §102(e) as being anticipated by Belani, *et al.* (US 6,772,350). Applicants' representative respectfully requests withdrawal of this rejection for at least the following reasons. Belani, *et al.* does not disclose or

suggest each and every element of applicants' invention recited in the subject claims.

A claim is anticipated only if *each and every element* as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ...claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Specifically, independent claim 1 recites *a data store that includes at least one hierarchical data structure* and a security component that *applies at least one security policy* to each of the plurality of data items *within a defined region in the data store*. Belani *et al.* does not teach or disclose applying a security policy to a defined region. Rather, Belani *et al.* discloses an access controller that manages accessibility to various resources in a multi-domain server and/or network. Belani *et al.* can apply an access list for a plurality of resources, a hierarchy associated with the resources, and/or user hierarchy information in order to provide secure access to the plurality of resources in their entirety. (See col. 6, lines 51-55). Yet, the security applied to the resource in Belani *et al.* is applied to the entire resource. In particular, Belani *et al.* states that the resource can be a file or a database, yet the resource security is applied to the entire resource - no section or region is defined and/or utilized to provide various disparate security policies within a data store. (See col. 7, lines 1-4). By applying the security policies to a defined region of the data store, the applicants' claimed invention significantly increases database performance. Belani *et al.* still utilizes conventional techniques of propagating a separate security file to each data item within the database. Nowhere in Belani *et al.* is a security policy applied to the plurality of data items *within a defined region in the data store*.

Moreover, Belani *et al.* does not teach or disclose *a data store that includes at least one hierarchical data structure* as disclosed in the applicants' subject claims. In particular, claim 2 recites the hierarchical data structure is at least one of a tree structure and a containment hierarchy. Belani *et al.* simply discloses a resource that can be, for example, a file or database. (See col. 7, lines 1-4). One of ordinary skill in the art would know that a typical database is

comprised of tables and/or flat-files, wherein no hierarchical data structure, and in particular a tree structure or containment hierarchy, is associated therewith.

Moreover, the Examiner contends Belani *et al.* teaches and discloses a hierarchical data structure as described in the subject claims. On the contrary, Belani *et al.* only discloses a hierarchical structure associated with resources, and user information. To apply security layers to resources in a server and/or network, Belani *et al.* utilizes three aspects 1) an access list containing rights and/or privileges associated with the resources; 2) a hierarchical representation of each resource included in the server and/or network that participates in the access control; and 3) a hierarchical representation of users and/or groups (*e.g.*, role-based authorization data such as an administrator and user in an operating system) that can utilize any resource on the server and/or network. (*See* col. 6, lines 63-66; col. 8, lines 16-26; col. 9, lines 25-35 respectively). The access list is an administrative list that provides authorization relating to resources. The resources can then be ranked and/or organized into a hierarchy called the resource hierarchy. Lastly, the user hierarchical information is simply the groups and user authorization structure associated with the network and/or server. In other words, Belani *et al.* does not disclose or teach any data store with hierarchical data, let alone a data store having a tree structure or a containment hierarchy.

Claim 3 recites the containment hierarchy is modeled as a Directed Acyclic Graph (DAG). Examiner incorrectly asserts that Belani *et al.* discloses such DAG as employed in the applicants' claimed subject matter. The DAG in Belani *et al.* refers to the hierarchy of resources and plotting such resources as a DAG, wherein the nodes in the DAG refer to the resources associated with the server and/or network. (*See* col. 6, lines 56-59). There is no disclosure in Belani *et al.* relating to a data store including a hierarchical data structure wherein the hierarchical data structure is a containment hierarchy that is modeled as a DAG.

Independent claim 22 has been amended to recite ***applying the security policy to the security region associated with the data store*** including the at least one hierarchical data structure. As stated *supra*, Belani *et al.* does not teach or disclose a data store containing hierarchical data structures nor applying the security policy to a defined region within such data store. The access controller that manages accessibility to various resources in a multi-domain server and/or network disclosed in Belani *et al.* provides secure access to the plurality of resources, wherein the security is applied to each resource in its entirety. Belani *et al.* does not

apply the security policy to a defined security region within a data store that includes hierarchical data structures.

Moreover, independent claim 29 recites applying the security policy to a data store containing at least one of a tree structure and a containment hierarchy in accordance with the security region. As stated above, Belani *et al.* does not teach or disclose the application of a security policy to a data store containing hierarchical data, let alone a data store containing a tree structure and a containment hierarchy in accordance with the defined security region. Belani *et al.* merely provides security layers (*e.g.*, access list, resource hierarchy, and user information hierarchy) to resources on a server and/or network. Nowhere in Belani *et al.* is a security policy applied to a data store that contains a tree structure or a containment hierarchy.

In view of at least the foregoing comments, it is readily apparent that Belani *et al.* does not teach or disclose each and every limitation of the independent claims 1, 22, 29, and 30 (and claims 3, 4, 6, 7, 10, 11, 21, 25-27, 31, and 32 which respectively depend there from). Applicants' representative respectfully requests the withdrawal of this rejection.

**V. Rejection of Claims 5, 12-17, 23, 24 and 28 Under 35 U.S.C. §103(a)**

Claims 5, 12-17, 23, 24 and 28 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belani, *et al.* in view of Dennis, *et al.* (US 6,466,932). Applicants' representative respectfully requests withdrawal of this rejection for at least the following reasons.

Claims 5, 12-17, 23, 24 and 28 depend from independent claims 1 and 22, as stated *supra*, Belani *et al.* does not teach, disclose or suggest applicants' invention as recited in such independent claims; and Dennis *et al.* does not cure the aforementioned deficiencies of the primary reference. Accordingly, this rejection should be withdrawn.

**VI. Rejection of Claim 8 Under 35 U.S.C. §103(a)**

Claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Belani, *et al.* (US 6,772,350) in view of applicants' alleged admittance of prior art. Applicants' representative respectfully requests the rejection be withdrawn for the following reasons.

The Examiner contends a holding relationship is admitted in the subject application's background and further asserts that a file located in a directory constitutes a holding relationship as the directory holds the file. Yet, applicants' representative respectfully asserts that such

disclosure relates to an example of a security model. In particular, the example refers to a security model wherein an Access Control List (ACL) can be associated with every file OR directory in a hierarchy. In other words, ACL's can be utilized to provide security with a particular file or to provide security with a specific directory. One of ordinary skill in the art would not interpret the citation provided by the Examiner as teaching or suggesting the Access Control List to be associated with a holding relationship of a containment hierarchy as recited in dependent claim 8. Applicants' representative respectfully requests this rejection be withdrawn.

**VII. Rejection of Claims 9 and 20 Under 35 U.S.C. §103(a)**

Claims 9 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belani, *et al.* in view of applicants' alleged admittance of prior art and further in view of Dennis, *et al.*

Claims 9 and 20 depend from independent claim 1. As stated *supra*, Belani *et al.* does not teach, disclose or suggest applicants' invention as recited in this independent claim; and Dennis *et al.* does not cure the aforementioned deficiencies of the primary references. Applicants' representative respectfully requests withdrawal of this rejection.

**VIII. Rejection of Claims 18, 19 and 33 Under 35 U.S.C. §103(a)**

Claims 18, 19 and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Belani, *et al.* in view of Sandler, *et al.* (US 2003/0217033). Applicants' representative respectfully requests the rejection be withdrawn for the following reasons.

As stated *supra*, Belani *et al.* does not teach, disclose or suggest applicants' invention as recited in independent claims 1 and 30 (of which claims 18, 19, and 30 depend there from); and Sandler *et al.* does not cure the aforementioned deficiencies of the primary references. Applicants' representative respectfully the rejection be withdrawn.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP535US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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